

## REMARKS

Applicant respectfully requests reconsideration of this application as amended. No claims have been amended. Claims 1-7, 10-13, and 16-20 were previously cancelled without prejudice. New claims 38-42 have been added. Therefore, claims 8-9, 14-15, 21-42 are now presented for examination. The following remarks are in response to the objections raised by the Examiner in the last Office Action (mailed, December 13, 2004).

### 35 U.S.C. § 102 Rejection

Claims 8-9, 14-16, 21-24, 28-29 and 33-34 stand rejected under 35 U.S.C. §102(e), as being taught by Lempel, U.S. Patent No. 5,978,909 (“Lempel”).

Lempel discloses that “the BTB and SBTB are *looked up to determine if any known branches reside in the line of code being fetched. Previously encountered branches are stored in the BTB and SBTB* based on the address of the last byte of the branch instruction.” (col. 5, lines 16-20; emphasis provided). Lempel further discloses that “*the SBTB tracks branch history* for those branches that are not stored in the BTB after they have been identified by the static predictor, but *before the branch instruction is executed and allocated in the BTB.*” (col. 5, lines 61-65, emphasis provided).

In contrast, claim 8, in pertinent part, recites “speculatively allocating a first branch entry for a conditional branch in a speculative branch target buffer (SBTB) prior to execution of the conditional branch responsive to decoding the conditional branch and finding no branch entry in an architectural branch target buffer (ABTB) corresponding to the conditional branch.” (emphasis provided). Although Lempel discloses a SBTB and a BTB, Lempel fails to disclose or reasonably suggest an architectural branch target buffer (ABTB), as recited by claim 8. For example, figure 2 from Lempel discloses dynamic

predictor 135 which *includes BTB 145 and SBTB 150*. (see Fig. 2, col. 6, lines 51-57). In contrast, figure 4B of the specification shows branch predication unit 420 which includes BTB 470. BTB 470 includes SBTB 490 and ABTB 480. (see Fig. 4B, Specification, page 11, lines 4-18). Lempel fails to disclose or reasonably suggest the use of an ABTB, as recited by claim 8. Accordingly, Applicant respectfully requests the withdrawal of the rejection of claim 8 and its dependent claims.

Claims 14, 21, 28, and 33 contain limitations similar to those of claim 8 and accordingly, Applicant respectfully requests the rejection of claims 14, 21, 28, and 33 and their dependant claims be withdrawn.

### **35 U.S.C. § 103 Rejection**

Claims 25-27, 30-32 and 35-37 stand rejected under 35 U.S.C. §103(a), as being unpatentable over Lempel in view of admitted prior art.

Claims 25-27, 30-32 and 35-37 depend from one of independent claims 8, 14, 21, 28, and 33 and thus include all the limitations of the independent claim from which they depend. Accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 25-27, 30-32 and 35-37.

### **New Claims**

New claims 38-42 contain limitations not disclosed or reasonably suggested by Lempel. For example, claim 38, in pertinent part, recites a selection logic, wherein the selection logic selects between the ABTB and the SBTB outputs depending upon which contains the youngest speculative branch data. Lempel does not disclose or reasonably suggest a selection logic, wherein the selection logic selects between the ABTB and the

SBTB outputs depending upon which contains the youngest speculative branch data.

Accordingly, Applicant respectfully submits that claims 38-42 are distinguished over the cited reference.

### **Conclusion**

In light of the foregoing, reconsideration and allowance of the claims is hereby earnestly requested.

### **Invitation for a Telephone Interview**

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

### **Request for an Extension of Time**

Applicant respectfully petitions for an extension of time to respond to should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

### **Charge our Deposit Account**

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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